

What is claimed is:

1. A battery pack comprising:

a laminate battery having a built-in electrode interposed between a first sheathing film and a second sheathing film, said first sheathing film and the second sheathing film
5 being lapped along an outer periphery of the electrode to thereby form lap sections, said lap sections being connected to hold the electrode inside of the laminate battery;

a terminal substrate disposed at the lap sections of the laminate battery and including output terminals at a front surface side thereof;

a substrate holder disposed between a rear surface of the terminal substrate and
10 the lap sections of the laminate battery; and

a first metal plate laminated on a first sheathing film side of the laminate battery;

wherein said terminal substrate is supported by the substrate holder, the lap sections and the first metal plate, said output terminals of the terminal substrate being disposed at a position to be brought closer to a same plane as a front surface of the second
15 sheathing film by means of the substrate holder.

2. A battery pack as recited in claim 1, wherein the lap sections of the laminate battery located at both sides of the electrode are bent along end surfaces of the electrode, said laminate battery being fitted inside a plastic frame having two open surfaces to thereby
20 constitute a framed battery unit, said first metal plate and a second metal plate covering

both surfaces of the framed battery unit.

3. A battery pack as recited in claim 1, wherein the first sheathing film of the laminat
battery has a planate form, said second sheathing film being bent along peripheries of the
5 electrode, said second sheathing film being connected to the first sheathing film at th lap
sections.

4. A battery pack as recited in claim 2, wherein said plastic frame includes a cover frame for
covering the front surface side of the terminal substrate, said cover frame being perforated
10 with contact windows for exposing the output terminals outside therethrough.

5. A battery pack as recited in claim 1, wherein at least one of the first metal plate and the
second metal plate include side walls for covering one side or both sides of the framed
battery unit.

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6. A battery pack as recited in claim 2, wherein a channel-form bent section formed by being
bent into a U-shaped form is provided at an end section of the first metal plate, said framed
battery unit being fitted into the channel-form bent section.

20 7. A battery pack as recited in claim 2, wherein side walls provided at both sides of the first

metal plate are bent into a U-shaped form, said framed battery unit being fitted into said side walls.

8. A battery pack as recited in claim 2, wherein said first metal plate includes side walls for
5 covering both sides of the framed battery unit and a channel-formed bent section for covering one end of the framed battery unit, said second metal plate including a vertical wall for covering the other end of the framed battery unit, said side walls surrounding said both sides of the framed battery unit, said channel-form bent section surrounding said one end of the framed battery unit, said vertical wall surrounding the other end of the framed battery
10 unit.

9. A battery pack as recited in claim 2, wherein four corners of the plastic frame are exposed at four corners of the framed battery unit formed by covering said both surfaces thereof with the first metal plate and the second metal plate.

10. A battery pack as recited in claim 1, wherein an electronic component for achieving a protective circuit of the laminate battery is mounted on the terminal substrate, said electronic component being fixed so as to protrude at the rear surface of the terminal substrate, said electronic component at the rear surface of the terminal substrate being
20 disposed at a hollow section provided at an upper surface of the substrate holder.

11. A battery pack as recited in claim 1, wherein said substrate holder is integrally formed of a plastic in its entirety, said substrate holder being provided with a peripheral wall and a protrusion to increase a substantial thickness thereof so that the output terminals are
5 placed on the same plane as the second sheathing film.

12. A battery pack as recited in claim 10, wherein said substrate holder is integrally formed of a plastic in its entirety, said substrate holder being provided with a peripheral wall, a protrusion, and a hollow section formed between the peripheral wall and the protrusion,
10 said electronic component fixed at the rear surface of the terminal substrate being disposed at said hollow section of the substrate holder.

13. A battery pack comprising:

a polymer battery having a built-in electrode interposed between a first sheathing
15 film and a second sheathing film, said first sheathing film and the second sheathing film being lapped along an outer periphery of the electrode to thereby form lap sections, said lap sections being connected to hold the electrode inside of the polymer battery;

a terminal substrate disposed at the lap sections of the polymer battery and including output terminals at a front surface side thereof;

20 a substrate holder disposed between a rear surface of the terminal substrate and

the lap sections of the polymer battery; and

a first metal plate laminated on a first sheathing film side of the polymer battery;

wherein said terminal substrate is supported by the substrate holder, the lap sections and the first metal plate, said output terminals of the terminal substrate being
5 disposed at a position to be brought closer to a same plane as a front surface of the second sheathing film by means of the substrate holder.

14. A battery pack as recited in claim 13, wherein the lap sections of the polymer battery located at both sides of the electrode are bent along end surfaces of the electrode, said
10 polymer battery being fitted inside a plastic frame having two open surfaces to thereby constitute a framed battery unit, said first metal plate and a second metal plate covering both surfaces of the framed battery unit.

15. A battery pack as recited in claim 13, wherein the first sheathing film of the polymer battery has a planate form, said second sheathing film being bent along peripheries of the
15 electrode, said second sheathing film being connected to the first sheathing film at the lap sections.

16. A battery pack as recited in claim 14, wherein said plastic frame includes a cover frame
20 for covering the front surface side of the terminal substrate, said cover frame being

perforated with contact windows for exposing the output terminals outside therethrough.

17. A battery pack as recited in claim 13, wherein at least one of the first metal plate and the second metal plate include side walls for covering one side or both sides of the framed
5 battery unit.

18. A battery pack as recited in claim 14, wherein a channel-form bent section formed by being bent into a U-shaped form is provided at an end section of the first metal plate, said framed battery unit being fitted into the channel-form bent section.
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19. A battery pack as recited in claim 14, wherein side walls provided at both sides of the first metal plate are bent into a U-shaped form, said framed battery unit being fitted into said side walls.

15 20. A battery pack as recited in claim 14, wherein said first metal plate includes side walls for covering both sides of the framed battery unit and a channel-formed bent section for covering one end of the framed battery unit, said second metal plate including a vertical wall for covering the other end of the framed battery unit, said side walls surrounding said both sides of the framed battery unit, said channel-form bent section surrounding said one end of
20 the framed battery unit, said vertical wall surrounding the other end of the framed battery

unit.

21. A battery pack as recited in claim 14, wherein four corners of the plastic frame are exposed at four corners of the framed battery unit formed by covering said both surfaces thereof with the first metal plate and the second metal plate.

22. A battery pack as recited in claim 13, wherein an electronic component for achieving a protective circuit of the polymer battery is mounted on the terminal substrate, said electronic component being fixed so as to protrude at the rear surface of the terminal substrate, said electronic component at the rear surface of the terminal substrate being disposed at a hollow section provided at an upper surface of the substrate holder.

23. A battery pack as recited in claim 13, wherein said substrate holder is integrally formed of a plastic in its entirety, said substrate holder being provided with a peripheral wall and a protrusion to increase a substantial thickness thereof so that the output terminals are placed on the same plane as the second sheathing film.

24. A battery pack as recited in claim 22, wherein said substrate holder is integrally formed of a plastic in its entirety, said substrate holder being provided with a peripheral wall, a protrusion, and a hollow section formed between the peripheral wall and the protrusion,